DOCUMENT RESUME

ED 243 748 SO 015 571

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TITLE The Character of Inquiry in Curriculum.
PUB DATE Apr 84
NOTE 75p.; Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA, April 23-27, 1984).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Curriculum Development; *Curriculum Evaluation; Definitions; Educational Research; Elementary Secondary Education; Higher Education; Inquiry; Theories

ABSTRACT

An analysis of curriculum journals indicates that curriculum inquiry is not a simple matter. It is characterized by raising problems, addressing each problem by a variety of methods, and proposing for each method a variety of kinds of solutions. Curriculum inquiry follows a "Musketeer Model": all for one and one for all. The predominant form of curriculum inquiry is a stated purpose to accomplish, the content is a concern about the commonplaces of curriculum, and the process entails first-order knowledge describing the properties of some phenomenon. The predominant method of curriculum inquiry is conceptual, especially opinion, analysis, and argument. The predominant kind of solution in curriculum inquiry is national, that is, providing a way of thinking as a solution to the problem. Curriculum inquiry is characterized by a topical flow type of inquiry, rather than a schematic structure. Efforts to define curriculum inquiry yield a definition of what curriculum inquiry is not, more clearly than what curriculum inquiry is. (LP)

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THE CHARACTER OF INQUIRY IN CURRICULUM

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running head: Curriculum inquiry

Acknowledgements: J. M. Rogan served as research assistant for this study, which was supported by a grant from the Academic Senate Committee on Research, University of California, Riverside. Copies of journals for analysis were generously supplied by the editors and publishers of Curriculum, Curriculum Perspectives, Educational Leadership, Journal of Curriculum Studies, and Journal of Curriculum Theorizing. A version of this paper was presented at the AERA annual meeting in New Orleans, April 1984.

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THE CHARACTER OF INQUIRY IN CURRICULUM

Abstract

What is curriculum inquiry? Analysis of curriculum journals revealed that curriculum inquiry characteristically pursues no one kind of problem but problems of various kinds, each characteristically studied by methods of all kinds, proposing solutions of various kinds for any kind of problem. This description is compared against lamentations and lessons, definitions, prescriptions, and stipulations about the nature of curriculum inquiry. The results are proposed for public discussion in favor of our shared understanding of what curriculum inquiry is.

THE CHARACTER OF INQUIRY IN CURRICULUM

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THE CHARACTER OF INQUIRY IN CURRICULUM

Who knows what curriculum inquiry is? Each of us knows when self is doing it or not, and all of us can tell on someone else who is doing it or not. But together we do not know and tell.

There are several ways to go about knowing what curriculum inquiry is. One way is to stipulate its nature, then agree on the definition. Other ways are to circumscribe the domain, legislate the process, enjoin the activity, and then assemble in the play and action on that field. These ways are familiar to us and they are known not to yield a public share of knowledge.

The way of this study is to characterize what scholars do when they report doing curriculum inquiry. It is a question of character rather than nature, of description not definition. It is a proxy way of knowing. There seems no way for us to know curriculum inquiry other than through representations of it--mimicry, report, avowals, rhetoric.

Whether all of us will follow the same course in pursuing curriculum inquiry is not at issue here. Rather, it is in favor of our public knowledge and joint discussion that this study turns to the literature in search of answer to the question, What is the character of inquiry in curriculum?

LITERATURE

The literature in curriculum is known to offer a variety of answers to any question. Rather than review the various individual answers on the question of what curriculum inquiry is, it is useful to describe their kinds.

There are three kinds of answer to this question. One kind proposes some way of thinking about what curriculum inquiry is. There are many proposals of this kind in the literature. Another kind proposes something to do about what curriculum inquiry is. Here there are proposals enough. A third kind proposes some statement of fact about what curriculum inquiry is. Few facts have been proposed in answer to this question.

Conceptual and rhetorical approaches

As with curriculum literature generally, literature of these first two kinds is marked by a variety of proposals, that is, different categories of proposed ways of thinking and acting. To illustrate, a version of the general question forms the title of several articles wherein the proposed answers are formed of definitions, conceptions, opinions, stipulations, directives, and exhortations (Lawn & Barton, 1979; Leithwood, 1981; Reid, 1973; Walker, 1973, 1974; Westbury, 1979).

Within each of these forms of answer, answers of different kinds have been proposed--e.g., not different definitions but definitions of different kinds. To illustrate, curriculum inquiry has been defined by the questions it raises, by the subject-matters it studies, by the methods it uses, by the knowledge it proposes.

In turn, each of these kinds of definition embraces different definitions of a kind. To illustrate different definitions by subject-matter, various scholars propose that curriculum research is defined by the study of curriculum practice (Goodlad, 1979), the study of the course of educational experiences (Schubert, 1982), the conditions of pupil behavior (Cook, Hovet, & Kearney, 1956), and the interactions of four subject-matter elements--teachers, students, subjects, milieus (Westbury & Steimer, 1971).

To illustrate definition by questions, here is a paradigmatic example (Taylor, 1979, p. ix).

> If fields of study may be defined by the questions which are central to their concerns, then curriculum studies may be defined in terms of two distinguishable groups of questions: [each group with three questions of prescriptive/descriptive sort--]
>
> What should be/is taught?
>
> What should be/are the results?
>
> What should be/is put in to produce them?

Other instances of this approach define curriculum research by its one central problem of one of these sorts, What should be taught, studied, and learned? (Walker, 1973); by two generic questions of something of these sorts, What is and what might be? (Reid, 1973); by one generic question of another sort, What might be done to give effect to intentions? (Westbury & Steimer, 1971); by the general question of how each of a set of six conditions can be realized (Leithwood, 1981); by

a set of 500 potential questions, of a descriptive sort, about a school's curricula (Goodlad, 1979); and by the set of 7000 possible questions generated by eight central questions of two further sorts, technical and managerial, but not questions of a value sort (Johnson, 1971).

It can be noted that this review is not attaching criticisms to these proposals but attributing to them the kinds that they are conceived to be.

Empirical approaches

Apart from the many answers that propose some way of thinking or acting, there remains the kind that proposes some statement of fact about what curriculum inquiry is, based upon inquiries in the literature. Here there are no categories of answer, for there are few answers of this kind. Accordingly, the individual answers will be described. Five studies will be evaluated as well as described in relation to the present study, which is one of their kind.

As one minor part of their provocative study of curriculum as a discipline, Westbury and Steimer (1971) inspected 178 citations in an issue of Review of Educational Research (June, 1966) devoted to curriculum. They take this approach in order to "explore what research into curricular problems is, what its fruits are, and answer (at least by implication) the question, What is curriculum research?" (p. 245).

They proceed to classify the citations into a table of 14 categories, and then conclude that the table "demonstrates the range

and incoherence of work in the field" (p. 245), giving grounds for "pessimism about the character and the quality of our research tradition" (p. 247). Only 14% of the titles were classified as "research papers." "There was remarkably little 'research' cited by the Review; most of the work reported was comment or near-journalism, reflecting neither sustained nor methodical exploration of empirical or theoretical issues" (p. 247).

One notes in criticism that the results may demonstrate the range and incoherence of the field by reason of the range and incoherence of the scheme used to describe the field. Some of the 14 categories describe the topic or content of an article (e.g., curriculum evaluation, objectives). Others describe its method or purpose (reviews, discussion, research papers). Still others describe its disciplinary source or theme (psychology), and even an individual thing (national assessment program). From the fact that these are 14 things of different kinds (rather than 14 different kinds of one thing), it must follow that the literature has range and incoherence. And from the fact that only one of the 14 things is research (all others being nonresearch), it must follow that remarkably little of the literature is research.

The results tell of one proportion of the literature that is nontopical, by force of having a research character; another proportion that is nonresearch, by force of having a topical character; and other proportions that are both nontopical and nonresearch, by force of having the character of psychology or

discussion or reviews. For that reason alone, the results of this study can tell nothing about the character of the literature, the range of topics, or the amount of research.

Moreover, one discovers that the literature which was consulted for its citations proposed in the first place to review mostly the practices of curriculum. (For example, the first article reviews "the changing curriculum," and two others review "teaching/learning materials and their implementation.") Thus it transpired that the largest category of citations found in this literature was "reviews of current practices"--whereas remarkably few were "research papers." Still it cannot be known what proportion of this literature bears on practice by contrast to being research and by contrast to addressing this and that topic of practice or research.

In sum, the facts that Westbury and Steimer adduce in answer to their question, What is curriculum research?, cannot themselves constitute an answer--true or not. The facts remain unknown. Yet the merit of their study does not turn on how accurately it presents the facts of the case. Rather its distinction is to have proposed a factual kind of answer to the question. All but the merest handful of studies propose instead conceptual or rhetorical answers.

That is also the distinction of a study by Vallance (1982). In a paper at AERA, she presented a "self-portrait of the curriculum field" by the device of analyzing 154 proposals submitted to AERA's curriculum division in 1980. These represent "154 statements of problems deemed by their authors to be essentially curricular in

nature," and together they constitute a "rich body of evidence as to how the field of curriculum study defines itself" (p. 2).

Vallance classified the problems into eight categories and nicely found "a wide array of topics" (p. 20). Half of the proposals dealt with "questions of practice," a finding which Vallance, by contrast to the previous study, welcomes: "the evidence seems clear that the profession has its feet on the ground" (p. 11). Her analysis of method into eight categories "uncovered the interesting fact that curricularists use a wide variety of research methodologies with approximately equal emphasis" (p. 11). This variety of method is also a welcome finding, for the field is clearly not "dominated" by traditional experimental methods but "instead is characterized by a receptivity to a variety of research methods according to the problem at hand" (p. 11). Only a handful of the proposals dealt with theory. This finding too is welcome: "this subdued flirting with theory was refreshing. It was clearly overshadowed by our meticulous attention to data-based research in the analysis of practice" (p. 13). In general, the patterns that emerge from the data suggest "just how broad the field of curriculum studies really is" (p. 18).

It may be noted that some of the breadth and variety, here favorably received, may follow from the breadth and variety of the categories used, just as with the range and incoherence found with disfavor in the previous study. For example, some categories of method characterize the procedure used (experimental, survey), others the style of inquiry (qualitative), some use a disciplinary label

(historical), others a rubric for assorted procedures (case studies, ethnography). The number of individual methods classified seems to total to about half of the 114 papers (papers only) classified, whereas the number of problems comes to more than one-and-a-half times the number of 154 proposals classified. Some problems were likely classified into multiple categories and some methods likely were not classified.

Three other studies refer to educational research generally. Grover and Charlton (1979) raised the question: "What proportion of research reports have clearly stated hypotheses?" Their method was to inspect 100 studies in 10 journals (e.g., AERJ) for 1966 and 1976. Their answer was that one-fourth of the studies have clearly stated hypotheses; the remainder either imply the hypothesis or state no hypothesis. It may be noted without criticism that this study bore on only one formulation of the problem, hypothesis. Another formulation was studied by Dillon (1983b) in classifying the questions posed in 520 studies in 9 journals for a single year. But half of the studies did not use questions at all. One may therefore wonder about the form of the problem in those studies that do not state it as either a hypothesis or a question.

As for the methods of research, Willson (1980) examined 280 AERJ articles between 1969 and 1978. He found that 41% of the research techniques derived from biology (e.g., correlation and chi square), 34% from agronomy (ANOVA), and 12% from psychology (factor analysis). One notes that 480 techniques were counted in 280 articles. One may

therefore wonder about the thing that was done to address the problem under study, by contrast to the several techniques used to do it or used to manipulate the data that came from doing it.

Moreover, despite the apparent array of two dozen different techniques on the list, all of them are broadly statistical or mathematical, perhaps of the kind commonly called empirical. One may therefore also wonder about the kinds of method that do not entail numeric data. Lastly, one wonders whether the data that are here implied as part of method might rather constitute a form of the solution. No studies have been found that examine the solution-component of research, for example, the answer to the question posed for study. (Certain reviews of research may approximate such a study.)

Together the five studies have in common the distinctive characteristic that they look at instances of research and propose statements of fact (mistaken or not) in answer to the general question. In this respect they differ from all other studies in the literature, which propose either some way of thinking (e.g., a definition) or some thing to do or use (e.g., empirical method). The study reported here takes its place in the literature among the five studies of an empirical kind. It too will examine instances of inquiry and it too will propose a statement of fact in answer to the question, What is curriculum inquiry?

PROBLEM

The problem for study runs: What is the character of inquiry in curriculum?

The question presupposes first that the character of curriculum inquiry is unknown but knowable. The question asserts that a thing denominable as inquiry exists, that instances of it can be identified, and that its properties can be discovered and described. It is not a question to define the nature of curriculum inquiry, nor to prescribe its properties. The properties that it exhibits are what is in question.

The question does not presuppose that the discoverable properties of inquiry in this field accrue to inquiry as a property of curriculum, nor that inquiry in curriculum differs from inquiry in another field. Why curriculum inquiry exhibits the properties that it does, and whether it differs from inquiry elsewhere, are unknown, for those questions can arise only after the question of character has been answered for inquiry in curriculum and inquiry in some other fields by comparison.

The term character generously embraces an array of things otherwise called attributes, qualities, properties, traits, features, characteristics. Character cannot, probably, be described exhaustively. But the kinds of characteristics that are of interest can be distinguished and instances described, so that the phenomenon in question can be characterized.

The phrase curriculum inquiry is a rubric embracing other terms such as curriculum research, curriculum studies, curriculum scholarship, and the like. The character of the things that these terms refer to is not known. The phrase is thus a sort of blank place-holder for the thing whose character is in question. To find that thing the question turns to people who think they are doing it in a place where it is thought to be done--in self-denoted curriculum journals; on the presumption that what will be found therein can be called curriculum inquiry, in that the articles may be considered as proxy for the activity they report or instantiate.

The people who are doing the things that are reported in curriculum journals think that they are doing some sort of curriculum inquiry; and the people who let them do it in there, but don't let other people do things of other sorts in there, also think that what is being done or reported in the journals is curriculum inquiry of some sort. What sort of activity that is, is the question for which an answer is being sought. The journals are recurred to as a sure place to find that activity (by proxy or instance) so as to describe its attributes and thereby yield knowledge of the character of inquiry in curriculum.

The general question assumes specific forms first for the components of inquiry--What are the problems, methods, solutions of curriculum inquiry?; next for the sequence of inquiry-- How are problem-method-solution related?; and last, its structure-- What is the place of problem-method-solution in curriculum inquiry?

As used here, problem-method-solution are placeholders that will admit a priori all manner of inquiries and will exclude no instance of inquiry. Problem is that which preoccupies; method is that which is done to address the problem; solution is that which is derived from method and adduced to the problem. The conceivable varieties of each of these things will be distinguished by the analytic categories described in the next section, the method of this study.

METHOD

In brief, the method was to inspect articles in curriculum journals, identify problem/method/solution, and classify each into categories of various kinds. The journals will be described first, then the procedures and categories of analysis.

Journals

Five journals were selected to represent curriculum inquiry, on the principle that they denote themselves as curriculum journals. These are: Curriculum, Curriculum Inquiry, Curriculum Perspectives, Journal of Curriculum Studies, and Journal of Curriculum Theorizing. A sixth journal was selected as one term of post-hoc comparison against the other five: Educational Leadership is published by the Association for Supervision and Curriculum Development but does not present itself as a journal of curriculum inquiry.

All articles in all issues published in 1981 were included; items such as book reviews, reports and notices, rejoinders and replies were excluded. An additional criterion was applied to Educational Leadership, such than an "article" must occupy at least two pages of text; this journal has also a magazine format with numerous one or two page items not comparable to articles in the other journals. A total of 101 articles were inspected in the five journals, and 70 in the sixth.

No claim is made that curriculum inquiry can be found only in these journals; rather, that what is found in these journals represents curriculum inquiry. Instances of curriculum inquiry can also

be found in other journals, along with instances of noncurriculum inquiry; in books and grant-reports; in unpublished sources; in meetings of professional associations; and in the workaday world of curriculum. No ready means comes to mind for collating these sources for analysis, nor for distinguishing within them those activities which represent inquiry and those which do not, those articles which are curricular and those which are not. Rather, the five selected journals present themselves in self-denoted curriculum terms and together constitute the body of curriculum journals, wherein curriculum inquiry is by self-description sure to be found.

The terms in which these journals present themselves in that regard are found in their titles, mastheads, notes to contributors, editorial statements, and institutional affiliations. All the titles include "curriculum," and all the editors hold academic positions at universities and colleges.

"Curriculum is the journal of the Association for the Study of the Curriculum and is published by Studies in Education Ltd. [England]." The editorial board consists of the council of that association, which began in annual Standing Conferences on Curriculum Studies and which states as aim "to bring together those concerned with, and interested in curriculum research and policy in all types of institutions." The editor holds an academic title and position at a college in England.

"Curriculum Inquiry welcomes formal and informal contributions on all matters relating to curriculum development, evaluation and

theory." The editors are affiliated with the Ontario Institute for Studies in Education. An editorial (Simon, 1980) describes the content as follows: "Political and philosophical essays, qualitative and quantitative studies, narrative portrayals, case studies, experiments--all may be found in the pages of CI, as long as the method chosen is used in the service of substantive inquiry" (p. 109).

"Curriculum Perspectives welcomes contributions on all matters relating to curriculum development, evaluation and theory." The editors and board members hold academic titles and positions at Australian institutions; the chief editor is professor and dean of education at Murdoch University, the other two are in a curriculum department and a Centre for Curriculum Studies. Notes for contributors specify that "Contributions may take the form of: (a) general papers that make an original contribution of an empirical or theoretical nature. (b) Papers of a more practical or applied nature and which are case studies about classroom research, curriculum development and evaluation..." (and brief reports, correspondence, book reviews, all excluded from analysis here).

"The Journal of Curriculum Studies will publish original contributions to curriculum theory, curriculum planning, evaluation, innovation, and practice, as well as original contributions to the theory, methodology and practice of teaching. The Journal will also publish case studies, research reports and notes as well as articles." The editors hold academic positions at universities in England, Canada, Australia, and the U.S. One of the editors (Reid, 1980)

describes three preferences as the 'genre' of the journal: "There is relatively little concern with a close definition of suitable content, there is a valuing of personal style, and there is a demand for coherent, well-informed argumentation" (p. 15).

"The Journal of Curriculum Theorizing welcomes manuscripts examining issues of curriculum theory, history, and criticism." These three categories are described by the editor (Pinar, 1980, p. 10) as follows. Historical work "makes more discernible the origins of the present situation." Criticism is "assessment of both historical and contemporary trends in curriculum theory and practice." Theory is "the construction of new points of view." The kind of theoretical work of interest is that which "is intellectually experimental, and which is born in study characteristic of the humanities and the arts." Its meaning is left "deliberately vague... in order not to stipulate in advance what form this work will take." The editor and advising editors all hold academic positions, mostly at U.S. universities.

Procedure

The procedure was to inspect the journals and describe the inquiry reported therein. The first and most crucial step was to establish the text of the problem for each article, because all subsequent analyses relied on the identification of the problem. The investigator and a graduate assistant in turn studied all the articles in a journal, then independently identified and copied the problem-sentence(s) from each article. The raters exchanged lists and independently recurred to the journal to check the identifications, to

correct them, or to write reasons for a choice. Again the lists were exchanged and the journal consulted. Finally the raters met in conference and together consulted the journal to resolve uncertainties (e.g., whether a given sentence contained two questions or one, whether to choose the more general or more specific version).

Thereafter the two raters followed the same steps (lists, exchanges, conferences) for classifying the problems into various kinds, next for identifying and classifying method and lastly solution. When all codings for a journal had been completed, the raters met to review the codings for consistency of application (e.g., the rule invoked for #10 is made to apply to #2). When all journals had been coded, all codings were given a final review.

Categories

The categories for classifying kinds of problem, method, solution were established theoretically by the investigator prior to inspection of the journals. Only their general sense will be described here. [Detailed definitions of the many categories are available from the author.] Five tables at end of text specify categories for the form of the problem (Table 1), its content (2) and process (3), and for the method (4) and the solution (5).

Kinds of problem

Problems are distinguished according to the form that they take, the content they bear on, and the process they entail.

Form (Table 1). Five categories of problem-form are distinguished. The problem may be formulated as a question to answer, as

an hypothesis to test, a thesis to sustain, a purpose to accomplish, or a topic to address. Statements of purpose that include a question/hypothesis/thesis are classified as one of these three. Where no statement of the problem can be found of these four types, the form of problem is classified as a topic, usually identified in the title or some topic sentence.

Content (Table 2). The topical content of the problem is classified according to what aspect of curriculum the problem bears on. Nine categories were established and thereafter grouped into four kinds--purposes, commonplaces, operations, and profession. The first and last kinds are constituted of a single category or class--the aims or purposes of education, and the profession or field of curriculum. Operations embraces the two categories of implementation and evaluation of curriculum. Commonplaces embraces categories of teaching, learning, subject-matter and milieu. (The category of milieu is comprised of two classes that had been used as categories for coding but thereafter combined as milieu--environment and context.) It is useful to note that the problems were classified according to these nine categories, and then the categories were classified according to these four kinds. To understand this study, then, one may choose to follow the analysis at either level--categories that group individuals of a kind or group categories of a kind.

Process (Table 3). The logico-cognitive process of the problem is classified according to what kind of knowledge about a given aspect of something is entailed, e.g., What is it about teaching that is in

question? The classification scheme comprises in all 17 categories and 12 subcategories grouped into five orders of information, partly specified in Table 3 and fully described in another paper (Dillon, 1983a). For purposes of this study, the sense of the scheme is given by considering what properties of a phenomenon are in question--its existence, its nature, its quality, its relations, etc. First-order problems entail knowledge of individual attributes, or properties; second- and third-order problems entail comparative and contingent attributes of the phenomenon in relation to some other. For instance, the question of Whether P exists is a first-order question, as also What P is. Whether P differs from Q is a second-order question of comparative attributes; Whether P causes Q is a third-order question of contingent attributes. It is useful to note that the scheme comprehends questions of both so-called theoretical and empirical character within the same categories, e.g., theoretical or empirical questions of conditionality (antecedent/consequent relations). An extra-order includes deliberative questions, Whether to do or think P.

To illustrate all these categories of problem, the problem for the present study is identified in the sentence, "What is the character of inquiry in curriculum?" The problem takes the form of a question, its content bears on the profession of curriculum, and its process entails describing character (a first-order question about one of the properties of curriculum inquiry).

Kinds of method

Categories of method are established according to what is done to address the problem. Fifteen categories were distinguished and grouped into three kinds--empirical, conceptual, and rhetorical (Table 4).

Methods which address the problem by giving a report, exhortation, or reddition are rhetorical in kind. Analysis, argument, opining, theorizing, and reviewing are methods of a conceptual kind. Methods of an empirical kind include the familiar procedures of experiment, survey, interview, observation and participant-observation, as well as inspection and intervention.

Method was analyzed by first detailing the procedures which the author was observed to follow in addressing the problem. These particulars were then characterized according to one of the 15 categories of method. It is useful to note that method is not classified according to what the author says the method was; e.g., not as analysis because "analysis" is said. Further, method is not classified according to statistical procedure used to treat the data, which in any event follow from the method rather than constituting it. A method may be classified as an empirical kind even when the author does not use a statistical treatment or yet report numeric "data," provided that the procedure is constituted of recurrence to phenomenal or world-factual events--by contrast to cognitive and expressive processes (conceptual and rhetorical methods). All categorial distinctions will again be noted where appropriate in the Results section of this paper.

To illustrate, the method of this present study is classified as inspection, a method of an empirical kind.

Kinds of solution

Categories of solution are established according to what it is that the solution-sentence(s) proposes. There are nine categories grouped into three kinds--factual, notional, material (Table 5).

Solution-sentences that propose a statement of fact (true or not) or a statement of law (regularized fact) are classified as solutions of a factual kind. Solutions that propose a way of thinking (not: a particular thought) are notional in kind; the three categories are definition, conception, perspective. Solutions that propose a thing to do or use are material in kind; the four categories are subject-matter, instrument, program, action. It is essential to note that solutions are not classified by their veracity or utility but by the kind of thing which they propose--a factual, notional, or material kind of thing.

To illustrate, the solution proposed in this study is classified as factual in kind because it proposes a statement of fact, mistaken or not, about what curriculum inquiry is.

In summary, the question for this study was addressed by inspecting curriculum articles for their problem-method-solution. The sample consists of 137 problem-method-solution sequences found in 101 articles in five curriculum journals for 1981 (and 74 problems found in Educational Leadership). An article may report two studies, whence two problems; a study may pose two questions, whence two answers. Analysis proceeded by computing percentages of problems/methods/

solutions in various categories for each journal and for all five journals together.

RESULTS

What is the character of inquiry in curriculum? Five tables at end of text report detailed results for the five major topics of analysis--the form of problem (Table 1), its content (2) and process (3), the method (4), and the solution (5). Figure 1 at end of text gives a visual summary of these results.

Here the results will be summarized in answer to the general question for study, for all five of the journals considered together. Results for each journal and differences among journals are reported in the tables. On the whole, the differences seem less remarkable than the similarities and will not be noted in the narrative. In any event this study describes the picture of curriculum inquiry that emerges from studying the literature as a whole.

To understand the context of the results, let us imagine if we can a devoted student of curriculum, or a scholar or worker in the field, who conscientiously work their way through all the studies in curriculum journals for 1981. A curious colleague from another field asks, "What does curriculum inquiry look like? What questions does it study, what methods does it use, what knowledge does it yield?" In answer, our devoted student describes the inquiries reported in curriculum journals.

The results will be presented under three major headings describing the components of inquiry, the sequence of inquiry, and the structure of inquiry.

Components of Inquiry

In general, curriculum inquiry is found to exhibit all kinds of problem, method, and solution. No one kind is characteristic.

Problems

What are the problems studied in curriculum inquiry? Problems may be described according to the form that they take, the content they bear on, and the process they entail.

Form (Table 1). The predominant form is a statement of purpose (45%)--a description of what the study sets out to accomplish, without stating as well some question, hypothesis, thesis as part of that purpose. One-third of all problems are given form as a question to answer, one-tenth as a thesis to sustain, and none as an hypothesis to test. Some studies (11%) formulate the problem as a topic to address; the topical form, however, provides no proposition of the problem but identifies it by the title of the article and/or some topical phrase such as "the problem of curriculum design." (By comparison, half of the articles in Educational Leadership formulate the problem as a topic for discussion.)

Content (Table 2). The problems of curriculum do not characteristically bear on teaching and learning, subject-matter and milieu, for all four of these commonplaces together do not account for half of the problem-statements in these five journals (42%). Still fewer of the problems bear on the purposes of education (14%) and the operations of implementing and evaluating curriculum (20%). The single predominant category concerns the profession or field of

curriculum (25%). Here there are noteworthy differences among the journals (Table 2). The profession of curriculum accounts for half of the problems in JCT but none in CR and EL; the operations of curriculum account for a third of the problems in CR and EL, but scarcely any in JCT. (No further analysis of EL was undertaken.)

Process (Table 3). The problems do not characteristically entail logico-cognitive processes describing the relationships between two or more variables, for less than a third entail relations of any kind, whether various categories of comparative or contingent relations. No problems at all were found to entail causality, and only some few (16%) entailed either antecedent or consequent relations. Six problems in all were found to be of a deliberative kind. In terms of the classification used here, curriculum studies characteristically inquire into first-order individual properties of some phenomenon (58%), predominantly its function or application (23%), that is, questions to know what a thing does and how it may be used. As classified by both content and process, knowledge of first-order properties is characteristically entailed in problems of every content--whether bearing on purposes (58%), commonplaces (47%), operations (78%), or the profession (62%). As for the predominant single category of process and content, problems concerning both purposes and operations characteristically entail knowledge of function/application (category #5 in Table 3); problems concerning commonplaces are characteristically a matter of describing character or quality (# 4); problems about the profession characteristically

entail matters of definition, that is, knowledge of nature and meaning (#3). All of these are first-order problems.

In summary, curriculum inquiry is characterized by the study of all kinds of problems rather than by problems of a particular kind. Of all the kinds, the predominant but not characteristic formulation of the problem is as a purpose to accomplish; the topical content bears on the group of commonplaces of education or particularly on the profession of curriculum; and the logico-cognitive process entails first-order knowledge of individual properties, particularly the functions and uses of things.

Methods

How are these problems studied? That is, what are the methods of curriculum inquiry? In general, methods of every kind and in every category are used (Table 4). Although some differences among the journals might be noted (e.g., conceptual methods particularly mark JCT, empirical methods least of all CR), it seems more notable that methods of every kind can be found in every journal, 8-10 different methods in each (Table 4).

Over half of the methods are of a conceptual kind, particularly in the category of opining (20%), then analysis and argument. Each of these categories accounts for more methods than do any of a dozen other categories.

The methods of curriculum inquiry cannot be characterized as empirical, even in the broadest sense used here. In the narrower sense, only one experiment was found in the journals, and only

one-tenth of the studies reported numeric data. Yet, even in the broader sense, less than a third of all methods were of any empirical kind--viz., constituted of recurrence to phenomenal events. These include the method followed by two investigators studying curriculum design in small schools. To achieve their stated purpose (viz., problem) of indicating criteria for curriculum design, they held discussions with headteachers of small schools and identified the design criteria most prominent in the teachers' experience. The method is thus an empirical kind, in the category of interview. Still, this empirical study reports no numeric data of any kind.

Of all 101 studies in these journals, only a dozen report numeric data. In three of these cases the data do not derive from the method followed but are borrowed from other sources and used as part of the method, which may be empirical or not. For instance, one study took data from an IEA survey and inspected them for knowledge about textbooks in developing countries. The article reproduces numeric data from this survey, yet the method of the article, while empirical, is not survey but inspection. Another study reproduces numeric data from a large survey on race relations conducted by the very authors. But neither the problem nor the method in the article is empirical. The stated problem is to clarify a paradox of educational aims and procedures in the matter of attitudes, and the method is conceptual, namely analysis. As the authors accurately describe it, "our discussion will draw into relationship philosophical analysis and empirical data" from that survey, and "our strategy is to use an

argued analysis to frame the results in order to strengthen the grounds for critical consideration."

Hence in classifying a method as empirical, the present study waives the matter of numeric data in favor of the particulars of the approach taken to the problem identified for study. Numeric or not, the method may be empiric or not. Less than a third of the studies take an empirical kind of approach, and less than a tenth report numeric data.

Problems of all kinds are studied by a conceptual kind of method. Conceptual methods are used for the great majority of problems concerning purposes (79%) and the profession (82%), for half of the problems concerning operations, and for a third of those concerning the commonplaces of education. Empirical methods are used for half of the problems about commonplaces.

In summary, methods of every kind are used to address any kind of problem in these journal studies. The studies use all seven methods of an empirical kind, all five of a conceptual kind, and all three of a rhetorical kind. About a third of the individual methods are empirical, while a half are conceptual.

Solutions

What solutions are yielded by the methods and adduced to the problems? Curriculum studies propose solutions of all kinds. In the first place are notional solutions, then factual ones and material ones (Table 5).

Half of all solutions are notional, a kind constituted of ways of thinking. The single category that predominates, accounting for one-fourth of all solutions, proposes a perspective to take (or an opinion to hold) for thinking about the matter. Another third of solutions are of a factual kind, constituted of statements proposing matters of fact, true or not. The remaining fifth are material solutions, constituted of things to do or use, particularly actions that are to be undertaken.

No solution was found to be constituted of a subject-matter. That is, none of the problems was solved by proposing a subject-matter to teach, learn, or design into a curriculum. No solution at all could be found in some few articles. For instance, in one case an answer was reported for a question that was not identified for study, while no answer to the question identified for study was reported.

It is essential to observe that the results do not report that most of the solutions are mere opinions while only a few are hard facts. These are not the terms of the categories in which the results are being reported. Solutions are classified not according to how veridical they are but according to what it is that the solution-sentence refers to. If it describes a thing that is a matter of fact, it is classified as a factual kind of solution. If it describes a way of thinking (not: a thought), the solution is of a notional kind. If it describes a thing to do or to use, it is a material kind of solution. Most of the solutions in these journals are constituted of ways of thinking, fewer of matters of fact, and fewer still of things to do or use.

What then, in general, are the problems, methods, and solutions of curriculum inquiry? The problems are not of one kind, nor are the methods and solutions. They are of all kinds.

The problems are predominantly (not characteristically) formulated as statements of purpose. The predominant single content is the profession of curriculum, and the predominant kind of content is the commonplaces of education. The characteristic process entails first-order knowledge of individual attributes, particularly function and application. Methods of all kinds are used, mostly of a conceptual kind. Solutions of all kinds are proposed, mostly of a notional kind.

This report of results has been worded so as not to imply a connection among the predominant types of problem, method, and solution. Each component has been described as a separate case. What now is the case for the three components considered together in sequence?

Sequence of Inquiry

How does curriculum inquiry proceed? Which kinds of method does it use for given kinds of problem, and which kinds of solution does it propose for those same problems?

In general, the sequence of curriculum inquiry is too various to be described in any one sensible way. Just as there are all kinds of problem, method, and solution involved, so are there all kinds of problem-method-solution sequences. A partial understanding of these sequences can be gained by examining their serial parts: relations for problem-method, for method-solution, and for problem-solution.

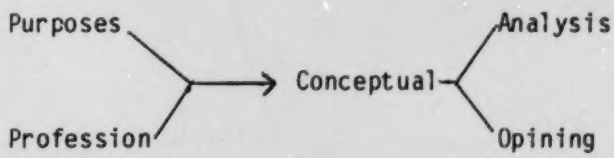
Problem-method

Although there are predominant kinds of problem and method, problems of each given kind are addressed by all kinds of method. Selected examples will illustrate this general case and a few interesting particulars.

Problems which bear on purposes and the profession are both addressed in the main (80%) by conceptual kinds of method, and partly by empirical and rhetorical methods (10% each). These problems are addressed by methods in every single category of a conceptual kind, particularly analysis of purposes and opining about the profession.

Half of the problems about the commonplaces of education are studied by empirical methods, particularly survey, then by conceptual and rhetorical methods. Half of problems about the operations of curriculum are studied by conceptual methods, particularly opining, then by empirical and rhetorical methods.

In summary, one of the problem-method sequences to emerge runs as follows:



This sequence describes not more than one-third of all problems, and not all problems of these two kinds (some also studied by empirical and rhetorical methods or yet other categories of conceptual method).

Method-solution

The relations between method and solution are more regular than those between problem and method, perhaps as a consequence of the categories distinguished for them. Yet solutions of all kinds are proposed to follow any one kind of method.

On the face of it, empirical methods yield factual solutions, and conceptual methods yield notional ones. But that need be only the semantic case. In fact, that describes the predominant case observed in these journals but not the entire case. Some empirical methods (15%) are followed by material and notional solutions; one-fourth of conceptual methods yield factual or material solutions; and, while half of rhetorical methods give rise to material solutions, the other half yield factual and notional ones.

Of empirical methods, for example, interview was found to give rise to a conception and a program in addition to facts in the main. All other empirical methods with more than one instance were followed also by either a conceptual or material solution. Observation yielded a conception, and both survey and inspection yielded an instrument.

Of conceptual methods, argument and review led also to factual and material solutions, three cases for each of factual statements and of actions to undertake. The majority of cases followed a conceptual method to a notional solution.

Of rhetorical methods, report yielded several factual solutions, several notional ones, and several material ones. Exhortation, by contrast, yielded only material solutions, none factual or notional, while reddition yielded only notional solutions, or no solution at all.

In summary, three method-solution sequences emerge.

(a) Empirical ——→ Factual

(b) Conceptual ——→ Notional

(c) Rhetorical ——→ Material.

These describe 85%, 73%, and 50% of the respective methods, together accounting for not more than three-fourths of all individual methods. It should be noted that these sequences involve kinds of method-solution, whereas the categories within may exhibit no such regularities in their mutual relations.

Problem-solution

The relations between problem and solution are multiplicitous, even more various than between problem and method and method and solution. The connections become elusive as one traces the multiple paths from problem to method, then from method through to solution and back. What solutions are proposed for which problems? In general, the answer here too is: all kinds for each kind.

Problems about the operations of curriculum are resolved equally by factual, notional, and material solutions, one-third of each kind. Half of the problems about the commonplaces of education receive factual solutions, a third receive notional ones, the remaining fifth material solutions. Problems in each of the four categories of commonplaces (teaching, learning, subject-matter, milieu) receive all these kinds of solutions. Notional solutions are proposed for most problems about the purposes of education and the profession of curriculum, and some of both also receive material solutions, but only

the professional problems are additionally resolved in some factual way.

Some problems in every single one of eight categories are resolved by proposing a perspective to take on the matter. In all categories but one (subject-matter) problems are solved by proposing a conception of the matter, and in all but two (learning and evaluation) by some action on the matter. The facts of the matter are proposed to solve some problems in all categories save for the purposes of education--problems for which no facts are proposed in solution.

In summary, three problem-solution sequences emerge.

(a) Purposes, Profession → Notional

(b) Commonplaces → Factual

(c) Operations → Factual, Notional, Material

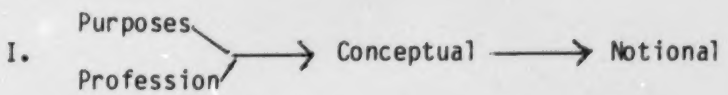
Of the four respective types of problem, the sequences account for 84%, 62%, 51%, and 100%. All together the sequences describe not more than two-thirds of all problems in the journals, about 20% in each sequence. In all categories some problems receive other kinds of solutions.

Problem-Method-Solution

We may now carefully piece together the series of problem-method, method-solution, and solution-problem relations in order to discern at

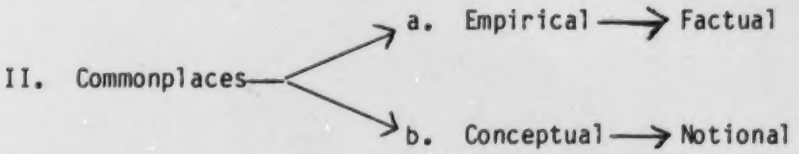
least an emergent problem-method-solution sequence of inquiry in curriculum. Each of the three sets of relations was found to account for a good proportion of the possible cases for that type of relation. Now the proportion will greatly diminish as a result of following one and the same individual problem through all parts of the sequence. Problems are then seen to follow, in the main, one of three sequences.

Sequence I. This sequence describes problems about purposes and the profession, studied mainly by conceptual methods and receiving mainly notional solutions.



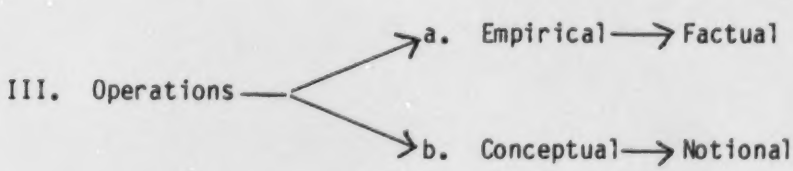
Sequence I is followed by 80% of purpose problems and 62% of profession problems. Together the individual problems (not the kinds) in this sequence account for one-fourth of all problems in the journals.

Sequence II. This sequence is followed by that group of problems called the commonplaces of education (in categories of teaching, learning, subject-matter, and milieu). As a group these are studied mainly by empirical methods and receive factual solutions, but a good portion are treated by conceptual and notional methods and solutions. Accordingly, Sequence II has two paths.



This sequence is followed by two-thirds of problems about commonplaces, 44% taking path IIa and 21% IIb. All together these account for one-fourth of all problems in the journals.

Sequence III. The remaining kind of problem concerns the operations of curriculum (implementation and evaluation). As noted, they receive in equal proportion factual, notional, and material solutions, but half of them are studied by empirical methods and more than a third by conceptual methods. Accordingly, they follow two paths in the main.



Sequence III is followed by half (56%) of the problems concerning operations, dividing again in half to follow path IIIa (26%) or IIIb (30%). All together these individual problems account for 11% of all problems in the journals.

Considered together, Sequences I+II+III account for two-thirds of all (individual) problems studied in these journals, 41% of which proceed by a conceptual method to arrive at a notional solution, and 23% via an empirical method to a factual solution. Many other problems follow a conceptual/empirical method and arrive at a factual/notional solution, or follow still other methods and arrive at these kinds of solution, or yet follow these kinds of method and arrive at other kinds of solution. The sequences describe only those individual problems of specified kinds that follow the specified kind of method to the specified kind of solution.

This variety is also revealed in sequences followed by problems considered in their logico-cognitive process (heretofore the sequences have described problems by their content). Only some illustrations will be given for the processes most frequently observed in the problems.

The two largest categories of problem-process (Table 3) are the first-order category of function/application, with 23% of all problems, and the third-order category of conditionality (antecedent-consequent relations), with 16%.

The 32 problems to know the workings and uses of something were studied by methods in 12 categories, of all three kinds. Five categories are of an empirical kind (the sole experiment found, surveys, interview, observation, inspection); five are of a conceptual kind (all five possible); and two of a rhetorical kind (report and exhortation). The answers are classified into seven categories, of all three kinds--one of a factual kind, three each of notional and material kinds. Half of the 32 methods were conceptual and half of the solutions were material.

The 22 problems to know the antecedent-consequent relations between two things were studied by 10 categories of method--four empirical methods (interview, participant-observation, survey, inspection), all five conceptual methods, and one rhetorical (report). They were answered in two factual categories, two notional, and one material. Half of the 32 methods were conceptual, and half of the solutions were notional. One-third of methods/solutions were empirical/factual.

The two next largest categories (14% each) are both first-order properties--questions to define substance or meaning, and to describe character or qualities. Half of the descriptive questions were studied by empirical methods and most received factual answers. But they were also approached by argument, opining, reviewing, and exhorting, and they were also answered by definition, conception, perspective, instrument, and program. As might be expected, the majority of the definitional questions were studied by conceptual methods (79%), half of them by analysis, and were given a notional answer (84%). But they were addressed also by interview, exhortation, and reddition, yielding answers of a conception, an action, and a perspective. Most of the 19 answers were a perspective or a conception; only four were definitions.

Hence in taking the paths described in Sequences I-II-III (for problems considered by content), the individual problems move along in a variety of categorial vehicles. The sequences describe only the kinds of problem-method-solution, kinds which group the several categories into which individuals assemble. Yet even with such broad boulevards laid out before them, fully a third of the individuals follow instead a series of other pathways. Some of their paths cross the major arteries and others wind among the side streets and alleys, many of their routes torturous and all too various to trace.

In general summary, then, the observant traveller in the land of curriculum will find it hard to follow the path of inquiry, detailed though the map in hand may be. In many cases the problems will refuse

to identify themselves clearly on sight. Once identified, the problems may take on various forms, bear on various topics, and work by various processes. Individual problems of every kind of form, content, process may next assemble into various categories and then proceed by all kinds of method to arrive at any kind of solution, or via any kind of method to all kinds of solution.

Curriculum inquiry follows a Musketeer Model: All for one, and one for all.

Structure of Inquiry

What is the structure of curriculum inquiry? How are problem, method, solution components fitted into its scheme? Details of structure are reported in Table 6 at end of text.

In general, the articles that report curriculum studies give little place to these components of inquiry. (They are indeed present, but where?) As a consequence it is difficult to identify the components, to follow their sequences, and to evaluate the knowledge proposed as a result of inquiry.

Characteristics of articles

Reports of curriculum inquiry are characteristically single-authored and topically arranged (Table 6). In these respects they differ from studies in the general education literature, which are reported by two or more authors and organized in a schematic arrangement. For example, the mean number of authors per article published in these curriculum journals is 1.2, and 1.3 for articles cited therein; but it is 1.9 for articles cited in RER for 1981 and

2.3 for articles published in AERJ for 1981. Curriculum articles resemble those in journals of educational philosophy and history (Educational Theory, History of Education Quarterly), where all 1981 articles and nearly all citations are single-authored; and they differ greatly from educational psychology (JEP) and sociology (Sociology of Education), where nearly all 1981 articles and half the citations are by two and especially by three to six authors (Dillon, 1982).

On average, an article in these curriculum journals contains 46 paragraphs divided into four sections given topical rather than schematic headings. One-tenth of all sections are given no heading, whether topical or schematic (rather a number, asterisk, or space), while one-quarter of all articles are not divided into any sections at all, whether named or numbered.

The convention for naming the sections is clear. They are topical headings, naming the topic with which the section deals. Thus of the four sections in an article, two or three will be topical headings, one either an introduction or a conclusion, or yet a section with no name.

Otherwise put, curriculum articles are not characterized by a schematic structure of inquiry. Schematic headings are those which indicate, by any of various names, sections reporting the conception or theory which informs the study, the problem for study, the literature or background to it, the method used, the results obtained, the interpretation or discussion thereof, and the conclusion. Headings of all these kinds, whatever their various names, together do not account for one-third of the sections in curriculum articles.

Where are problem-method-solution to be found? They are not found under those headings, for those headings label less than 10% of the sections. Most particularly, only 1% provide for Problem (variously named). The problem must be searched for, then the method and solution. These will be found in a section with either a topical heading or no heading at all; or yet somewhere in the midst of the narrative flow uninterrupted by sectional divisions or headings of any kind or name.

In summary, problem-method-solution are not worked into the formal structure of reports of curriculum inquiry. No reason comes to mind that may account for this circumstance. Curriculum articles need not ape some format. Yet by various means curriculum studies of any kind can be reported so as clearly to identify the problem, method, solution entailed. For instance, grace of language can suit the problem where stilted headings are thought unsuitable. Rigor of thought rather than pointed language can give to the conclusion a form congruent with the problem which it proposes to resolve. And so forth.

Place of problem

In the absence of schematic structure and/or a label indicating where the problem for study lies, the question arises, What is the place of problem in curriculum inquiry? All of the studies in these journals give some form to the problem, but few give any place to it.

The problem can generally be found somewhere in the first part of an article. Yet many articles place the problem in the middle part, and one article placed it only in the very last sentence of the text.

As noted, a good many articles do not give to the problem any place at all within the text but announce it in the title. The reader cannot realize that it is the title that formulates the problem until after having searched for a problem throughout the beginning and middle parts of the text. Then it is that the title is thought to identify the topic for study, albeit not what is problematic about the topic. Although the title occupies the most prominent place, it gives least place and weakest form to the problem.

Finding the place of the problem is difficult not only because of the lack of schematic structure, the absence of a problem-like heading, and the extent and vagueness of the textual space that must be searched. It is difficult also because the sentence(s) that formulates the problem takes the same form as any other sentence in the article. Hence the search for the problem becomes something like searching for the proverbial grain of sand. The grain probably lies somewhere on the beach rather than in the water. The problem is thought to lie somewhere in the beginning of the article rather than at the end. But which of all the grains, and which of all the sentences, is the problematic one? For instance, which one of the declarative assertions proposes the thesis to be sustained?

If the problem is not positively identified by the author, then it will be uncertainly identified by the reader, making method and solution even harder to find for certain. For instance, which one of all the remaining sentences in the article represents the solution that the author proposes for the problem represented in some one of the preceding sentences?

Matters worsen when authors clearly identify one component but not another, or clearly state one and another version of the same component. As noted, in some cases no solution at all can be found for a problem clearly identified from the start. In other cases authors may at the end of an article state as an answer something which does not correspond to the question identified for study; aver having fulfilled a purpose which does not compare with the stated purpose of the study; reiterate some thesis not iterated before; and proffer a resolution about some topic which had not been described as problematic and in need of resolution in the first place.

Case of questions

These general difficulties of finding the problem that is being studied when it is not identified will be illustrated by the particular case of questions. Nearly all of the articles in these journals contain questions, but only a few identify a question as the problem for study. Of 600 questions in these journals, 40 formulate the problem. The others may be related to the problem, formulating perhaps a sub-issue; or they may represent either rhetorical questions, serving to move the narrative along, or questions for further research, raising problems for someone else to study. (For a study of questions in educational research generally see Dillon, 1983b.)

A reader will find some six questions per article, encountering one question every 7-8 paragraphs or so. Only in 28 of the articles will some question represent the problem for study; only 7% of all

questions will formulate the problem; and only two of the 600 questions will be found in a section labelled something like problem.

In face of this interrogative panoply, it is the reader who must decide whether and which one if any of the 560 other questions might represent problems under study. The choices must be provisional. At some point the author may identify another question as the problem for study, another sentence formulating the problem in non-interrogative terms, or yet no sentence at all. The reader may arrive at the end of the article only to encounter as solution an answer proposed to some other question not identified as the problem, or to discover that no question was at issue all along, rather some thesis has been argued, some hypothesis tested, some purpose accomplished, or some unproblematic topic resolved.

In all of these cases the reader must begin anew to construe the inquiry being reported. First the components must be sought out, next their several relations traced and their sequence followed; and finally, if all is seen to have gone well, then the question-answer proposition may be evaluated for the warrant of its claim to knowledge about curriculum. If all has not gone well--the components are not present or related--then the reader must construe the question-answer proposition. That is certain not to be the same question-answer as the author believes himself to have proposed, notwithstanding his omission of sentences proposing that question-answer. As is well known, a question can have a range of possible answers. An answer in turn may serve a range of possible questions.

In final and sad consequence, the state of knowledge in curriculum, confused as it has often been remarked to be, collapses amidst the disarray of question-answer propositions construed by readers and authors of the literature, the whole unsustained by a discernible structure of inquiry.

An alternative is provided by the device of having already clearly in mind the identified question that is at issue in a given study. The inquirer is a good source to provide that prior and positive identification. Next the answer is identified that is proposed for that question. The answerer is a good person to do that. Then the method whereby the study addressed the question and arrived at the answer may be identified. The investigator is good for that too. Finally the worth and meaning of it all is evaluated. Anyone may do that, now. Discussion ensues on the significance of that question-answer rather than any other, while the question of what question has been studied and what answer has been proposed does not arise.

DISCUSSION

Answers to two general questions will be discussed in light of these findings about the character of curriculum inquiry. First, What is the matter with curriculum inquiry? Then, What is its nature?

The Matter with Curriculum Inquiry

Scholars beyond number have averred that something is the matter with curriculum inquiry, and they have gone on to specify what is the matter. The question arises only on the general view that curriculum inquiry should have nothing the matter with it; only on some specific view of the matter that it should have; and only on seeing that it does not have it; and the answer follows therefrom, according to view. Hence all of these answers, though they may look alike and though they may look like they answer the same question, are proposing different answers to different questions according to the different underlying definitions of curriculum inquiry which the overriding facts in face violate. This violation then calls forth lamentations and lessons.

Lamentations

These are complaints. They find fault with curriculum inquiry for enjoying the character that it exhibits instead of possessing the nature that it should and which, if it willed to become possessed of that nature, would permit curriculum inquiry to exhibit the character that it should instead of the character that it now enjoys by nature.

The Dies Irae of curricular liturgy is familiar enough to be chanted without fear, for it is well known not to be eschatological. The day quando judex est venturus has already arrived and it is the

chanter who is judge of the dead and dying in this confused struggle on the field of curriculum. It is not known how many people believe any longer in the words. Life goes on. Yet for being liturgical the words provide some comfort if they are said rightly. No one can chant the whole version; here are some verses.

1. For unsustained enquiry into unstable subjects,
   curriculum discipline does not exist
   (Westbury & Steimer, 1971).
2. For inquiry into noncurricular problems,
   curriculum research lacks pertinence
   (Cook, Hovet, & Kearney, 1956).
3. For inquiry into curricular problems by nonempirical methods,
   curriculum research suffers dearth (Walker, 1973).
4. For profusion of research paradigms,
   curriculum suffers breakdown (Pinar, 1980).
5. For confusion of theoretical syntax,
   curriculum suffers an acute problem (Mann, 1975).
6. For reliance on theory,
   curriculum is moribund (Schwab, 1969).
7. For all practical purposes,
   curriculum is dead (Huebner, 1976).

Although a requiem, this liturgy is secular and no R.I.P.s are added. Lessons may be read, though, and commentaries.

Lessons

"The major fault of curriculum inquiry," begins one lector (Short, 1981), in pointing to several faults of curriculum inquirers, is

> in their being so often undisciplined in defining their broad goals, in choosing forms of inquiring appropriate to their task, and in mastering and faithfully carrying out the arts of inquiry associated with these various forms of inquiry .... (p. 220)

Another lectionary has it for doctoral students that "sooner or later they recognize that their field is characterized by a paucity of well-established knowledge, a meager, inconsistent theoretical base, an unclear structure, and a lack of any widely accepted, standard mode of inquiry" (Johnson, 1971, p. 24). A commentary has it that "the consensus of opinion seems to be that the field is in disarray, if not in crisis...." (Walker, 1976, p. 271).

At much the same time but in different places, a more hopeful recital can be heard. Here after a bookful of chapter and verse is the promised future of curriculum research (McNeil, 1981):

> Comprehensive curriculum inquiry;
>
> synoptic activity as curriculum inquiry;
>
> conceptualization as curriculum inquiry;
>
> action research as curriculum inquiry.

The very last sentence in this lectionary draws the lesson: "All in all, there is plenty of evidence that the curriculum field is not moribund, but very much alive" (p. 369). The items that here give

evidence of life and promise for the future include the very ones which conspired the death and demise of curriculum inquiry according to the other canon.

An unexpected lesson is read to all by an unremitting reviewer of knowledge production in curriculum (Short, 1973):

> The literature of the curriculum field frequently includes estimates of the quality of research productivity in curriculum. Many authorities believe it to be quite low, but rarely is any indication given as to whether these judgments are based on comparisons with what is done in other fields of educational research, with some standard internal to the curriculum field itself, or with some other criterion in mind. Little precise data can be found to confirm or refute these positions. ... There is clearly a need for the field of curriculum to study both quantitatively and qualitatively its own research productivity .... (p. 247)

Whatever is or is not the matter with curriculum inquiry, then, must first be a matter of its nature, and that is a matter of definition. The character of curriculum inquiry may remain a matter for description, ascertained by examining instances of inquiry in the field. The descriptions may then be compared against the definitions to see wherein character violates nature.

The Nature of Curriculum Inquiry

The nature of curriculum inquiry is exhibited in the definitions,

prescriptions, and stipulations of various scholars in curriculum. Its character is exhibited by the various inquiries in curriculum journals, as described in the present study.

Definitions

One kind of definition defines curriculum studies by its central questions. One of the questions by which curriculum studies has been defined (Taylor, 1979; Walker, 1973) runs: "What should be/is taught and learned?" Considered first by the "what" as representing subject-matter, this definition describes 10% of the problems in the curriculum journals. Considered by "taught/learned" as representing all aspects of teaching and learning, it describes 20% of the problems. Considered by "should" as representing purposes or aims of education, it describes 14% of the problems. In all of its parts taken together (purposes, subjects, teaching, learning), definition-by-this-question describes less than half of the studies in curriculum journals for 1981. Put otherwise in terms of the definitional approach, more than half of the studies in curriculum journals do not constitute curriculum studies.

Another kind of definition defines curriculum inquiry by the subject-matter studied. One of the subject-matters by which curriculum inquiry has been defined (Westbury & Steimer, 1971) is the commonplaces of teacher, student, subject, and milieu. Together these four describe about 40% of the problems in the journals. In view of definition-by-this-subject, more than half of the studies published in curriculum journals do not constitute curriculum inquiry.

On the descriptive approach to the question, these definitions do not define the half of what curriculum inquiry is.

Prescriptions

Another approach is to prescribe what curriculum inquiry is. One version prescribes what a research problem is. Many prescriptions stipulate the process, form, and structure of the problem.

As the first criterion of "good research problems," one prescription runs: "First, the problem should express a relationship between two or more variables" (Kerlinger, 1979, p. 32; also Ary & Razavieh, 1979; Tuckman, 1978). Less than a third of the problems in these curriculum journals entail any kind of relationship between variables or things, whether comparative or contingent relations. On this view, some 70% of problems in curriculum research are not good research problems.

A second criterion prescribes the form of the problem. "Second, the problem should be stated in question form" (Kerlinger, 1979, p. 32; also Ary & Razavieh, 1979; Tuckman, 1978). Another version is more insistent: "A problem must take the form of a question" and none other (Steiner, 1978, p. 16). Less than a third of the problems here take the form of a question. On this view, some 70% of problems in curriculum research are not good research problems, nor can they be "relevant and fruitful" ones (cf. Steiner, 1978, p. 14).

A third type prescribes the structure of a research question. "A good research question cannot be answered yes or no. Answers to good research questions are not dichotomous" (Hopkins, 1980, p. 124). Of

the 43 questions studied in the curriculum journals, four-fifths cannot be answered yes or no (20% can); two-thirds require at least a sentence in answer, and the remainder require at least a word or phrase. On that view, 80% of the questions in curriculum research are only potentially good research questions, in that they do not exhibit the structure that good research questions do not exhibit.

Whatever the merit of these prescriptions, one may say on the prescriptive view that most problems studied in curriculum research fail to be what research problems are, or one may say on the descriptive view that the prescriptions fail to describe what most problems for curriculum research are. In answer to the question of what curriculum inquiry is, the first proposes a failing nature, the second a faulty prescription.

Stipulations

Some versions stipulate what curriculum inquiry is by positing that it consists in the doing of something and then exhorting the doing of the thing that it is. "What is curriculum inquiry? It is doing-X. Do X."

To his title question, "What curriculum research?", Walker (1973) gives the answer that is first implied in the question and then later stated in a section heading as "the dearth of curriculum reseach" (p. 60). There is a dearth of curriculum research because there is a dearth of empirical research in curriculum. The exhortation is to do (empirical) research on the central problems of curriculum.

Due to misconceptions about and lack of faith in empirical inquiry, curriculum scholars "have failed to conduct the empirical research needed to clarify the nature of the phenomena and problems we address" (p. 58). The central problems are identified, and empirical research is specified as "systematic, disciplined study of observable phenomena" (p. 59)--and distinguished from watching without system and discipline. (Also excluded are the activities of curriculum planning, policy-making, creating, implementing, and criticism.)

In these terms the majority of studies found in the curriculum journals do not constitute curriculum research. Even in the broadest sense of empirical used in this study, less than a third of the methods were classified in categories of an empirical kind. Only 10% of the studies were found to report numeric data. On Walker's view, something like one out of every ten curriculum researchers are doing the kind of thing the doing of which constitutes curriculum research.

This view led to an interesting situation when Walker later came to review the curriculum literature, for in light of this view he could not see much research to review. "A strict interpretation of the term 'research' would exclude most of what people who devote their careers to the study of curriculum matters do, and it would leave very little else to review" (Walker, 1976, p. 269). In order to do a review of research on things that are not research, Walker stipulated a change of nature such that more of the things he was faced with became research.

> So it seemed prudent to construe research broadly enough to include analytical, speculative, and critical essays, and informal accounts based on first-hand experience,

--and then he stipulated a view of inquiry such that other things remained nonresearch--

> but not so broad as to include simple descriptions of curricula, special pleading on behalf of some curricular cause, or other forms of writing for purposes other than inquiry. (p. 269)

Thus on pragmatic grounds Walker broadened the domain of research and on apriori grounds foreshortened the domain of inquiry.

On Walker's earlier stipulation of what curriculum research is, neither his review article nor his previous one represents curriculum research. On the newly stipulated view, can the two articles be included in a review of research?

The answer is not clear. If the earlier article is considered special pleading on behalf of some curricular cause, such as pleading for empirical research to be done on the central problems of curriculum, then it cannot be included, nor can the later article if the review which it reports and the descriptions which it presents are a form of writing for purposes other than inquiry; save that both may be included if they are considered essays, the first critical and the second analytical. On the other hand, the review article itself includes for review, under title of "inquiring into the nature and fate of the curriculum field itself" (p. 299), a body of writing in

two groups, one by authors "willing to accept schools as they are, while working to improve them," and another that "urges the adoption of a critical stance toward schooling" amounting to the abandonment or destruction of schools as we know them (p. 300). This second group that is a form of writing for purposes of inquiry but is not special pleading on behalf of some curricular cause "attempts the conversion of his reader by the persuasiveness of his case and the eloquence of his appeal" (p. 302). Of individual writers in both groups whose form of writing is for purposes of inquiry, several are described to "urge" and to "advocate" various things, include reforms "advocated" by Walker himself. The sum of these writings is called "studies of the field itself" (p. 271). They are included for review apparently because they fall within the newly stipulated domain of research, even though to all appearances they fall outside of it.

One of the things that on neither the earlier nor later stipulation would constitute curriculum research is the doing of the thing that Reid (1981) calls curriculum deliberation. However, writing about that thing would constitute inquiry--if the writing were an informal account based on first-hand experiences with curriculum deliberation, yet not a simple description of it or a special pleading on behalf of it, as Reid does when he writes about deliberation. Hence doing Reid's deliberation is not inquiry and Reid's description of it is not inquiry, but someone else's informal account about having done deliberation is inquiry, while Reid's formal account about doing deliberation is inquiry only when he speculates about deliberation or criticizes it.

Reid too proposes a thing to do in answer to what curriculum research is. Walker proposed as answer to his earlier title question, "What curriculum research?", the doing of empirical research on the central problems of curriculum. By contrast, the answer that Reid (1973) proposes to his title question, "What is curriculum research?" is not to do research on a "scientific model" but to abandon it. "It is better to do so if we seriously wish to confront the issues central to the activity of curriculum research" (p. 98).

The kind of research that Reid proposes be done is understandable enough but hard to describe in terms of the categories in this study. He advises that researchers aim "for impressionistic data, for insights, for clarifications, for ways of looking at things...." (p. 96); and he recommends "a naturalistic, humanistic, impressionistic mode of research, with an emphasis on description, on case study, ..." (p. 97). Over half of the problems in the journals were found to entail knowledge of individual attributes of some phenomenon--"descriptive" questions, perhaps; only 16% entail antecedent/consequent relations--"explanatory" questions, perhaps. Half of the solutions propose "ways of looking at things"--definitions, conceptions, perspectives. Only 10% of the studies seem to follow the "scientific model" of research that Reid recommends be abandoned.

Most simply considered, the findings of this study suggest that according as nature is stipulated, either 1 out of 10 or 9 out of 10 curriculum researchers are doing curriculum research.

SUMMARY & CONCLUSION

To answer the question, What is the character of inquiry in curriculum?, this study examined instances of inquiry in curriculum journals in search of warrant for a statement of the form: "Curriculum inquiry raises an A-sort of problem, addressed by a B-sort of method, proposing a C-sort of solution."

The first conclusion is that curriculum inquiry is not a simple matter of ABC. It is characterized by raising problems of A and B and C kinds, addressing each kind of problem by P and Q and R kinds of method, and proposing for each kind of problem X and Y and Z kinds of solution. Curriculum inquiry follows the Musketeer Model: All for one and one for all.

Figure 1 provides a visual summary of the kinds of problem, method, and solution found in the five curriculum journals for 1981. Here the text reviews the general findings as characterizations of curriculum inquiry.

The problems

Curriculum inquiry is not characterized by one kind of problem but is positively characterized by problems of various kinds. Their predominant form is a stated purpose to accomplish, next a question to answer, then a thesis to sustain and a topic to address, but not an hypothesis to test. Their predominant content bears on the group of concerns about the commonplaces of curriculum (teaching, learning, subject, milieu) or on the single concerns about the profession of curriculum. Their predominant process entails first-order knowledge

describing the properties of some phenomenon, particularly the property of function--to know what something does and how it may be used.

The methods

Curriculum inquiry is not characterized by one kind of method but is characterized by methods of all kinds. The predominant kind is conceptual, particularly the one method of opining, then empirical and rhetorical kinds of method. Empirical methods do not predominate, and of these methods only a minority yield numeric data. Curriculum inquiry addresses its problems by no particular method but by all five methods of a conceptual kind (especially by opining, analysis, argument) and by all seven methods of an empirical kind (survey, inspection), as well as by all three methods of a rhetorical kind.

The solutions

Curriculum inquiry is not characterized by one kind of solution but is characterized by solutions of various kinds. The predominant kind is notional, proposing a way of thinking as solution to the problem. The predominant individual solution is of a different kind, factual, proposing a statement of fact as solution. Remaining solutions are of a material kind, proposing a thing to do or use. Curriculum inquiry proposes solutions that are first of all notional, then factual and material.

Sequence of inquiry

Curriculum inquiry is not characterized by one kind of problem-method-solution sequence nor by various kinds of sequence. It

is characterized by multiplicitous relations among problems, methods, solutions of various kinds. Three of the sequences that their relations form describe: (1) some problems about the purposes/profession of curriculum that are studied by some method of a conceptual kind leading to some solution of a notional kind; (2) some problems about the commonplaces of curriculum, and (3) some problems about the operations of curriculum, both (2 & 3) studied by some methods of empirical/conceptual kinds leading to some solutions of factual/notional kinds. No one sequence predominates, and other sequences describe other problems. The sequence of curriculum inquiry embraces "all for one and one for all."

Structure of inquiry

Curriculum inquiry is not characterized by schematic structure but by topical flow wherein problem-method-solution figure but find no place. All studies give form and flow to problem, method, solution but few give it structure and place. In a few studies the flow eventuates in a solution to a problem that was not initiated, or initiates a problem for which no solution eventuates. In most studies the flow introduces several questions, one or another of which may or may not give form to the problem for study; while among the declaratives concluding the flow, one or another may or may not form the answer to one or another question--or yet may form a solution to another form of the problem. Within the flow of curriculum inquiry question and answer are left fluidly to be found and the proposition they form construed, so as to yield, but uncertainly, knowledge of curriculum.

What is curriculum inquiry? In answer, the foregoing sentences propose statements of fact to describe the character of inquiries in curriculum journals. That is an unfamiliar way of answering the question. One result is to encourage us to look and see whether the proposed statements of fact are accurate or not, and the characterization apt or not, in describing the things that we do.

Other ways of answering the question are far more familiar in the field. They include proposing to define the nature of curriculum inquiry and to prescribe its character; to conceive of its essence and to circumscribe its extent; to stipulate its problems, to enjoin its method, to exhort its solutions. One familiar result is that we do not seem to know what curriculum inquiry is.

Yet everyone has a notion of what curriculum inquiry is. Given that notion, we may wish to conclude that the findings from this study describe something that we are certain is <u>not</u> curriculum inquiry. For, we know that it is really something else.

One question that arises in that case is, What is this something-else that curriculum inquiry really is? (And why are so few people really doing it?) Yet the various answers are already familiar, and contested. Instead, two more fruitful questions arise for private reflection and then public discussion. Each of us may ask ourselves: Where does my knowledge of curriculum inquiry come from? What question about curriculum inquiry does my knowledge answer?

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Table 1

Problem Form

Form	Percent of Problems						
	CR (n=19)	CI (n=20)	CP (n=17)	JCS (n=38)	JCT (n=43)	All (N=137)	Educ. Leader. (n=74)
QUESTION	11	30	41	29	40	31	34
HYPOTHESIS	-	-	-	-	-	-	-
THESIS	5	15	6	13	16	12	4
PURPOSE	68	45	47	50	30	45	17
TOPIC	16	10	6	8	14	11	45
All	100%	100%	100%	100%	100%	100%	100%

Table 2

Problem Content

Content	Percent of Problems (0=problem absent)						
	CR (n=19)	CI (n=20)	CP (n=17)	JCS (n=38)	JCT (n=43)	All (N=137)	Educ. Leader. (n=74)
PURPOSES	10	15	6	8	23	14	9
1. Purposes (+aims, objectives)						(14)	(9)
COMMONPLACES	53	45	24	66	21	42	57
2. Teaching/ers			0			(10)	(9)
3. Learning/ers	0					(12)	(19)
4. Subject						(10)	(13)
5. Milieu (Environment + Context)			0			(10)	(15)
OPERATIONS	37	10	53	18	5	20	32
6. Implementation (+ innovation, design)						(15)	(30)
7. Evaluation						(4)	(3)
PROFESSION	-	30	18	8	51	25	1
8. Field of curriculum	0					(25)	(1)
All	100%	100%	100%	100%	100%	100% (100%)	100% (100%)

Table 3

Problem Process

Process	Percent of Problems (X=problem present)					
	CR (n=19)	CI (n=20)	CP (n=17)	JCS (n=38)	JCT (n=43)	All (N=137)
PROPERTIES	63	45	76	61	53	58
1. Existence/affirmation					X	(1)
2. Instance/identification			X		X	(3)
3. Substance/definition	X	X	X	X	X	(14)
4. Character/description	X	X	X	X	X	(14)
5. Function/application	X	X	X	X	X	(23)
6. Rationale/explication		X	X		X	(4)
COMPARISONS	5	20	6	13	9	11
7. Concomitance				X		(1)
8. Equivalence	X	X			X	(2)
9. Difference		X	X	X	X	(8)
CONTINGENCIES	21	35	18	18	16	20
10. Relation				X	X	(4)
11. Correlation				X		(1)
12. Conditionality	X	X	X	X	X	(16)
13. Biconditionality						(-)
EXTRA-ORDER	10	-	-	8	19	10
14. Deliberation	X				X	(4)
15. Unspecified (other)					X	(1)
16. Unclear				X	X	(5)
All	100%	100%	100%	100%	100%	100% (100%)

Table 4

Method

Method	Percent of Methods (X=method present)					
	CR (n=19)	CI (n=20)	CP (n=17)	JCS (n=38)	JCT (n=43)	All (N=137)
EMPIRICAL	5	35	53	47	14	30
1. Experiment		X				(1)
2. Survey		X	X	X		(9)
3. Interview	X	X	X	X		(5)
4. Observation				X		(4)
5. Part.-Observation		X	X			(1)
6. Inspection (e.g., documents)		X	X	X	X	(9)
7. Intervention					X	(1)
CONCEPTUAL	53	60	41	39	79	57
8. Analysis	X	X	X	X	X	(16)
9. Argument (inference, dialectic)	X	X	X		X	(10)
10. Opining (single view)	X	X	X	X	X	(20)
11. Theorizing (interrelated views)				X	X	(3)
12. Reviewing	X	X		X	X	(7)
RHETORICAL	42	5	6	13	7	13
13. Report	X		X	X		(7)
14. Exhortation	X			X		(4)
15. Reddition		X			X	(3)
All	100%	100%	100%	100%	100%	100% (100%)

Table 5

Solution

Solution	Percent of Solutions (0=solution absent)					
	CR (n=19)	CI (n=20)	CP (n=17)	JCS (n=38)	JCT (n=43)	All (N=137)
FACTUAL	10	30	53	45	23	32
1. Fact						(29)
2. Law	0		0	0		(3)
NOTIONAL	42	60	35	34	56	46
3. Definition	0					(7)
4. Conception (+theory, model, paradigm)						(12)
5. Perspective (+viewpoint, opinion)						(26)
MATERIAL	42	10	12	21	16	20
6. Subject-matter (+content, set of materials)	0	0	0	0	0	(-)
7. Instrument (+technique, method)			0			(5)
8. Program (a curriculum, organization, structure)		0	0	0	0	(2)
9. Action						(12)
OTHER	5	0	0	0	5	2 (2)
All	100%	100%	100%	100%	100%	100% (100%)

Table 6

Characteristics of Articles

Characteristic	Journal					
	CR	CI	CP	JCS	JCT	All
N OF ARTICLES	14	15	14	24	34	101
MEANS PER ARTICLE						
Authors	1.1	1.3	1.4	1.3	1.1	1.2
Paragraphs	27	59	31	37	62	46
Sections	3	5	5	4	5	4
Questions	4	5	5	6	7	6
PERCENTAGES						
% Articles divided by sections	57%	93%	79%	79%	73%	76%
% Sections by name (of any sort)						
1. Introduction (titled or not)	20%	19%	13%	18%	8%	14%
2. Conception	-	1	-	-	2	1
3. Problem	-	3	1	-	1	1
4. Method	2	8	7	4	1	4
5. Results	5	3	3	3	1	2
6. Discussion	-	3	4	3	1	2
7. Conclusion	17	8	8	9	11	10
8. Topical name	55	50	64	59	53	56
9. No name	-	5	-	3	24	10
All sections	100%	100%	100%	100%	100%	100%

FIG. 1 – PROBLEMS, METHODS, SOLUTIONS IN 1981 CURRICULUM JOURNALS